

ILHIE PARTNER On-Boarding Handbook

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Executive Summary

The Illinois Office of Health Information Technology (OHIT) and the Illinois Health Information Exchange Authority are working together to build the Illinois Health Information Exchange (ILHIE). The ILHIE is a statewide exchange, part of the statewide secure electronic network for sharing clinical and administrative data among health care providers in Illinois. The ILHIE will allow health care providers and professionals to exchange electronic health information in a secure environment which will help prevent duplicate tests and procedures and ensure the accuracy of prescriptions and other medical orders.

InterSystems HealthShare, <u>www.intersystems.com/healthshare/index.html</u>, was selected as the technology platform for the implementation of the ILHIE. InterSystems HealthShare is a comprehensive software solution that provides aggregation, de-duplication, and sharing of clinical data among multiple organizations on a regional or national basis.

The services that will be provided by the ILHIE include: Provider Directory, Master Patient Index, Record Locator Service, Security, User/System Authorization and Authentication, Patient Consent Management.

The outlined goals of the ILHIE include: improved treatment outcomes, improved coordination of care, strengthening of health information technology and increased patient collaboration. The four use cases include: Emergency Room, Specialist Referral, Meaningful Use/Provider Incentive Payment, and Public Health Reporting.

This handbook will introduce the Data Sharing Partner (PARTNER) management teams to the process of On-Boarding with the ILHIE. The action steps required of a participating PARTNER are described in detail.

The scope of this document is limited to the information exchange infrastructure based on IHE profiles. ILHIE also offers ILHIE Direct, a secure point to point messaging solution. This set of services can be accessed by contacting OHIT directly.



1. On-Boarding with the Illinois Health Information Exchange (ILHIE)

The Illinois Office of Health Information Technology has prepared this handbook to introduce the PARTNER management teams to the process of On-Boarding with the ILHIE. This document will outline the likely action steps associated with PARTNER participation in the statewide health information exchange infrastructure in general.

2.1 The ILHIE

The <u>Illinois Office of Health Information Technology</u> is working with the <u>Illinois Health Information Exchange Authority</u> to build the <u>The Illinois Health Information Exchange</u> (ILHIE), a statewide exchange, part of the statewide secure electronic network for sharing clinical and administrative data among health care providers in Illinois. The ILHIE will allow health care providers and professionals to exchange electronic health information in a secure environment, which will provide vital patient information at the point of care, help prevent duplicate tests and procedures, and ensure the accuracy of prescriptions and other medical orders.

OHIT and InterSystems (ISC) will implement the ILHIE in four phases:

Phase I	Project Initiation	It includes setting up the data center, configuring core services, setting up the PMO, establishment of the On-Boarding process, outreach to potential partners for On-Boarding, and beginning the On-Boarding of signed partners
Phase II	Integration of Alpha Partners	It introduces Integration of the initial group of ILHIE test partners ("Alpha Partners") supporting the Emergency Room Use Case
Phase III	Integration of Beta Partners	It adds Integration of a new group of partners ("Beta Partners") and extends to include the Specialist Referral Use Case
Phase IV	Production Rollout	It focuses on production rollout and includes extension to the Public Health Reporting and Meaningful Use/Provider Incentive Payment Use Cases



2. ILHIE Services

During the alpha and beta phases, the ILHIE hopes to achieve interoperability with the core service offerings:

- Master Patient Index (MPI) using HealthShare HSPI
- Master Provider Directory (MPD) using HealthShare HSPD
- Use of ILHIE Record Locator Service (RLS)

The implementation of the ILHIE exchange services will facilitate the aggregation of a standard continuity of care record based on the consolidated information from all ILHIE data sources (in compliance with privacy and consent laws such as HIPAA and state statutes). After achieving alpha and beta phase milestones, incremental action plans will be formulated to enhance existing ILHIE exchange services as well as expand into new service areas. These plans will be based on priorities identified by PARTNER leadership and will use the ILHIE core services at their base.

3.1 ILHIE Use Cases

The following use cases will be demonstrated as part of the ILHIE implementation through the configuration of core services and integration of data partners. For details refer the usecase documents.

1	Emergency Room	Clinicians locates, add, or updates the patient's demographic information within the provider's or data partners electronic medical record (EMR) or health information exchange (HIE) system during intake. Adds and updates are sent to the ILHIE.	ILHIE Use Case 1_Narrative 1a-1b En
2	Specialist Referral	When a patient is referred by a Primary Care Physician to a Specialist, the Specialist sends a query for specific data from the EMR/HIE to the ILHIE.	Usecase_Specialist Referral_V0.2.docx
3	Meaningful Use/Provider Incentive Payment	The provider sends a report (quality measures) to HFS Performance Improvement Project (PIP) service to verify meaningful use. PIP service accumulates data and reports results to the provider. The PIP service authorizes payments.	



4	Public Health Reporting	A patient presents to a Primary Care Physician and is diagnosed with a reportable condition. The Primary Care Physician prepares a report via EMR/HIE and forwards to the Public Health Node (PHN).	ILHIE Use Case 4_PHR.docx
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3.2 Data Sharing Agreement

The Office of Health Information Technology will provide a Data Sharing Agreement to the prospective PARTNER for approval and signature.

3. PARTNER Readiness to Participate

The initial baseline PARTNER readiness to participate is established during the PARTNER Identification Phase. Expectation from Partners is tabulated in BRD_Document section 4.0.

An in-depth technical integration readiness analysis of IHE transactions and C32 content is described in Functional Requirement Document section 3.2 and 4.0

4.1 Data Sharing Agreement

The partners are required to enter into Data Sharing agreement provided by Office of Health Information Technology.

4. IHE Technical Readiness to Integrate

PARTNER IHE Technical Readiness to Integrate is assessed prior to proceeding with the ILHIE PARTNER configuration and PARTNER EMR/HIE connectivity. This analysis is performed to establish baseline capabilities of the PARTNER and the PARTNER'S EMR/HIE in respect to the integration with the ILHIE. Once the PARTNER has provided sample IHE transactions and C32 content, IHE Technical Requirements are reviewed to ensure that all integration prerequisites are in place prior to engagement.

5.1 IHE Questionnaire

The *IHE Questionnaire* covers the technical requirements needed for basic communications and data exchange. The questionnaire asks the partner to identify their Clinical Software Vendors, Platforms, and Versions. The questionnaire will further request information to help establish EMR/HIE Vendor IHE Profile Support, XACML Support, SAML Support, HITSP CXX Specification Conformance, and CDA Content Module Support. The document is organized into the following sections:

- Document Purpose
- EHR System Information
- IHE Profiles / Actors
- SAML Assertion (Authentication)



- Supported HITSP Specifications
- XACML (Consent declaration)
- Supported CDA Content Modules
 - Entries
 - Sections
- Additional CDA Sections and Entries
- Additional Information (Patient Summary Documents)

5.2 Required IHE Transactions

The following IHE transactions are required in support of the workflows discussed in Sections 2 and 4. The EMR/HIE Vendor ability to support the exchange is confirmed during the PARTNER Readiness to Participate phase.

- PIXv3 Patient Add
- PIXv3 Patient Revise
- PIXv3 Query (Request and Response)
- XDSb RegistryStoredQuery (Request and Response)
- XDSb RetrieveDocumentSet (Request and Response)

5.3 Sample IHE Transactions and C32 Content

The partner will provide the following sample documents:

SAML Assertion (authentication)

Security Assertion Markup Language (SAML) is an XML-based open standard for exchanging authentication and authorization data between security domains.

XACML Document (consent)

The eXtensible Access Control Markup Language (XACML) standard defines a declarative access control policy language implemented in XML and a processing model describing how to evaluate authorization requests according to the rules defined in policies.

Fully populated C32 (test data)

Sample C32 documents must be generated from the PARTNER's own EMR/HIE system. These cannot be vendor sample documents or documents generated from a vendor test/development system. Documents should contain as complete of data set as possible given the EMR/HIE Vendor's current capabilities.

5.4 Sample C32 Content Analysis / PARTNER Conformance

The format of data exchanged between ILHIE and its PARTNERs is the C32 specification (http://www.hitsp.org). The InterSystems Integrations Analyst will examine document structure and content to identify specification compliance, content, and triage identified issues. Meetings will be scheduled as needed to review and prioritize issues for resolution.

5.5 Remediation Process

Remediation of identified issues is an iterative process requiring active participation between the ILHIE, the PARTNER, the PARTNER'S EMR/HIE Vendor, and ISC. Meetings will be scheduled as needed to assess issues identified during content and conformance analysis. Outstanding issues will be prioritized and assigned for resolution. Dependent on the nature of any outstanding issues, the ISC Integration Analyst will sign off on readiness to enter the configuration phase of the project.



5. On-Boarding Validation

Validation is the primary activity of the PARTNER On-Boarding and occurs in different forms throughout the process. During IHE Technical Readiness Validation, IHE Transactions and C32 Content are validated against IHE standards, HealthShare, and ILHIE requirements for conformance. Prior to PARTNER Integration Validation, Connectivity testing will ensure that IHE Transactions are exchanged between the PARTNER EMR/HIE and the ILHIE. PARTNER Integration Validation as described in this section is an organized activity that requires the most amount of time from the team. Following PARTNER Integration Validation, Consolidated System Testing will validate that the PARTNER is able to exchange data with other PARTNERs in the ILHIE.

6.1 ILHIE Environments Used for Validation

The ILHIE has several non-Production environments that are planned for use during PARTNER On-Boarding. The BASE environment is used during IHE Technical Readiness testing to validate IHE transactions and C32 content prior to establishing PARTNER connectivity. The TEST environment is primarily used to establish basic connectivity with the EMR/HIE test system without SSL. Since no PHI can be exchanged with this environment, validation activities in this environment are typically performed by the IHE and PARTNER technical teams using the EMR/HIE test environment. Part of Configuration and Connectivity testing for the UAT environment is the establishment of SSL. This UAT environment will be introduced to the PARTNER and ILHIE test teams for clinical validation.

6.2 IHE Technical Readiness Validation

IHE Technical Readiness Validation is performed by the ISC integration analyst against the ILHIE BASE environment using sample IHE Transactions and Sample C32 documents. This activity is described in more detail in section 5.

6.3 Connectivity testing

Connectivity testing is performed predominantly by ISC and PARTNER technical resources. IHE transactions and C32 documents are first exchanged between the TEST environments for the purposes of validating stability of configuration, customizations, and updates within the customer environment prior to release to the customer for Integrated and Consolidated System testing. This validation is repeated in the UAT environment with SSL in place.

Both activities utilize test plans which exercise each IHE transaction expected to satisfy the intended PARTNER workflow. Processing of C32 documents will validate that no general errors occur during consumption into the ILHIE HealthShare. Clinical validation is not performed here.

6.4 PARTNER Integration Validation

Integration Testing is performed predominantly by PARTNER resources with assistance from the Office of Health Information Technology and ISC. Integration Testing covers the interaction of the ILHIE UAT environment with individual PARTNER environments. Sample test plans are provided to the PARTNER and the Office of Health Information Technology for review and modification. Plans should be tailored by the PARTNER to test their workflow and validate data is presented correctly from both the technical perspective and a general clinical perspective. Thorough clinical testing occurs primarily with Consolidated System Testing.



6.5 Consolidated System Testing

Consolidated System Testing is performed predominantly between multiple PARTNERS and by PARTNER resources with the assistance of the Office of Health Information Technology and ISC. Consolidated System Testing is intended to validate system functionality across multiple PARTNERs against defined and agreed use cases in the ILHIE UAT environment. Sample test plans are provided to the PARTNER and the Office of Health Information Technology for review and modification. Plans should be tailored by the PARTNER to test their workflow and validate data is presented correctly from a clinical perspective. This activity occurs outside of the On-Boarding process and will be coordinated with other PARTNERs after successful conclusion of the new PARTNER's Integration validation.



6. PARTNER On-Boarding Process

The PARTNER On-Boarding Process commences upon execution of a Data Sharing Agreement and assignment of a PARTNER implementation team.

The PARTNER On-Boarding Process involves a collection of related, structured activities with the specific goal of successfully integrating the PARTNER with the Illinois Health Information Exchange (ILHIE). This process is divided into four distinct phases consisting of predefined work tasks, milestones, and deliverables. A summary description of each phase is outlined below and a sample timeline is shown in Figure 3.1.

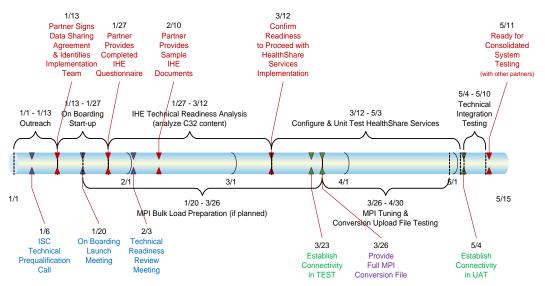


Figure 3.1

7.1 On-Boarding Start-up

The On-Boarding Start-up phase will be an introduction of the ILHIE to the PARTNER project team. It involves the introduction of project team members from the ILHIE, the PARTNER, and InterSystems Corporation (ISC) as well as defining of each team's roles and responsibilities. Project work tasks will be identified, deliverables agreed upon and milestones are scheduled. An overview of the integration software, InterSystems HealthShare, will be presented for informational purposes. Technical requirements needed for basic communications and data exchange between the ILHIE and PARTNER are defined in this phase. During this phase a technical overview of the ILHIE architecture will be presented to the project teams and Use Cases for the specific data exchanges will be reviewed. The *IHE Questionnaire* will be provided to the PARTNER for completion. This questionnaire is used to ascertain the specific technical requirements of the integration. Additionally, the PARTNER will provide sample IHE documents produced from their EMR/HIE system.

7.1.2 On-Boarding Launch Meeting

The goal of the Project Launch Meeting is to introduce the project team, provide an overview of the ILHIE, review the On-Boarding process, define team roles/responsibilities, and identify project deliverables. The PARTNER Implementation team will be educated on process, documentation, data needs and provide/review On-



Boarding materials. The typical audience includes all members of the PARTNER, the ILHIE, and the ISC Implementation Teams. It is advantageous for the PARTNER to include their EMR/HIE Vendor in this meeting; however the EMR/HIE Vendor is most essential during the IHE Technical Readiness Analysis phase. The desired format is generally in person with a planned duration of 2-3 hours.

The partner will complete the *IHE Questionnaire* (described in detail in Section 5) in a follow-up meeting.

7.2 IHE Technical Integration Readiness Analysis

The Readiness Analysis phase is meant to establish the baseline capabilities of the PARTNER and the PARTNER's EMR/HIE in respect to the integration with the ILHIE. This process is further described in Section 5.

7.2.1 IHE Questionnaire Review

The InterSystems Integration Analyst reviews the completed *IHE Questionnaire* for readiness to schedule the Technical Readiness Review Meeting.

7.2.2 Technical Readiness Review Meeting

The Technical Readiness Review Meeting is meant to review the *IHE Questionnaire* and HITSP C32 sample document requirements. During this meeting, all members of the PARTNER, the EMR/HIE Vendor, the ILHIE, and the ISC Implementation Teams are typically present.

Following the meeting, the partner will provide a sample SAML Assertion (authentication), XACML Document (consent), and a fully populated C32 (test data) generated from the PARTNER's own EMR/HIE system.

7.2.3 C32 Content Analysis / PARTNER Conformance Remediation

The InterSystems Integrations Analyst will examine document structure and content to identify specification compliance, content, and triage identified issues. Meetings will be scheduled as needed to review and prioritize issues for resolution.

7.3 Integration Configuration

During this phase, services are configured and connectivity with the PARTNER is established. The ILHIE will work with the PARTNER to create appropriate test scripts for validation of the IHE transactions and content delivery.

7.3.1 Create Test Plans

The ILHIE Analyst will work with the PARTNER to create test scripts and test cases for validation of IHE transactions and content delivery.

7.3.2 Establish Services and Connectivity

The InterSystems Technical Lead will configure ILHIE IHE Services and establish connectivity with the PARTNER EMR/HIE system.

7.4 Integration Validation

Integration Validation is the final phase of the On-Boarding process. Its purpose is to execute and validate the test scripts developed during configuration. Similar to the



readiness remediation process above, Integration Validation is an iterative process requiring active participation among Implementation Team members representing the PARTNER, the ILHIE, the EMR/HIE Vendor, and ISC. Successful validation will result in the ILHIE and the PARTNER executing an Acceptance Document. This process is discussed further in Section 6.



Appendix 1

	Referencing Documents		
1	Business Requirement Document (BRD)	BRD_ILHIE_V0.3.doc	
2	Functional Requirement Document (FRD)	FRD_ILHIE_V0.2.do	
3	Usecase 1 -Emergency Room	ILHIE Use Case 1_Narrative 1a-1b En	
4	Usecase 2-Specialist Referral	Usecase_Specialist Referral_V0.2.docx	
5	Usecase 3A –Adding a New Patient	Usecase_3A_Add PIX New Patient_0.3.	
6	Usecase 3B-Updating an existing Patient	Usecase_3B_PIX Update Existing Patie	
7	Usecase 3C-Seeking C32	Usecase_3C_Seeking C32_V0.2.docx	
8	Usecase 4-Public Health Reporting	ILHIE Use Case 4_PHR.docx	



Appendix 2

Frequently Asked Questions for Illinois Providers and Professionals

i. What is Health Information Technology?

Over the past 20 years, there has been a major change due to computers and electronic technology. Areas such as banking, shopping and the news have long ago adopted e technology. Until now, the field of healthcare has largely not used this technology, which is sometimes called health IT

ii. What is Health Information Exchange?

Today, most providers write patient medical information on paper charts which are not easily available and are hard to share with their patients and with other care providers. Health Information Exchange (HIE) is when a healthcare provider such as a doctor's office, specialist, hospital, clinic or lab share patient health records electronically through a secure network.

iii. What are the Benefits of Health Information Exchange?

When fully functional and exchangeable, electronic health records can provide

more than what paper records can deliver, including:

Improved Treatment Outcomes

Patients receive better care if providers have access to complete information. It

can also improve diagnostics and reduce or prevent medical errors.

Improved Coordination of Care

Better integration, organization and sharing of patient health records among all

providers involved in a patient's care will ensure that each specialist has the same accurate and up-to-date information about a patient; ultimately leading to

better treatment and care outcomes.

Improved Efficiency in Practices

Improved integrated scheduling that links appointments to progress notes, automated coding, claims management, improved communication with labs, and

health plans, formulary checks etc. can all provide efficiencies and cost savings.

Strengthens Health Information Technology

Electronic Health Record systems interface with a provider's existing technology and will adapt to future expanded technology.

Increases Patient Collaboration

Shared access to electronic records can create a more collaborative and informed patient. This is especially important in the management and treatment



of chronic conditions. It can also provide patients with follow up care, information

links and the exchange of emails between providers and patients.

Fewer Forms for Patients to Fill Out

Provider access to patient health records will reduce the need for patients to fill

out duplicate information when visiting various health services.

Access to Stimulus Funds and Other Incentives

Helps maximize provider access to funding for the adoption of Health Information

Technology and the demonstration of meaningful use.

iv. What is Meaningful Use?

Meaningful Use is part of a coordinated set of regulations established to help create a private and secure electronic health information exchange system. To become "Meaningful Users" providers need to demonstrate they're using certified electronic health records technology in ways that can be measured in quantity and in quality.

For more information visit:

https://www.cms.gov/ehrincentiveprograms/30 Meaningful Use.asp

v. Are There Provider Incentive Programs?

The Medicare and Medicaid Electronic Health Record Incentive programs provide incentive payments to eligible professionals, hospitals and critical access hospitals as they adopt, implement, upgrade or demonstrate meaningful use of certified technology in their first year of participation and demonstrate meaningful use for up to five remaining participation years. Registration for both the Medicare and Medicaid programs are now open. For information and to register for Medicare incentive payments visit:

https://www.cms.gov/ehrincentiveprograms/20_RegistrationandAttestation.asp,

For more information and to register for Medicaid incentive payments visit: http://www.hfs.illinois.gov/ehr/.

To learn more about which electronic systems and modules are certified for the Medicare and Medicaid Electronic Health Records Incentive Programs, visit http://healthit.hhs.gov/

vi. What is ILHIE Direct Messaging?

The ILHIE Direct Messaging service (Offered at no cost December 2011 throughout 2012) will help providers to achieve the key Stage 1 requirements for Meaningful Use for exchange, and provide an easy "on-ramp" for a wide set of providers and organizations looking to adopt. It offers a secure, scalable, standards-based method of sending encrypted health information directly to known, trusted recipients. For more information contact us at hfs.hie@illinois.gov, or call 1-312-814-1600.

vii. What are Regional Extension Centers?

To assist providers in implementing and becoming "Meaningful Users" of electronic health records, two Illinois Regional Extension Centers provide



outreach and support services to health care providers. For more information about implementation, contact the extension Centers at these addresses: For Statewide Providers: www.ilhitrec.org, For Chicago Providers: www.chitrec.org/

viii. What About Privacy and Security?

The same Federal health information privacy protections that apply to paper records also apply to electronic health records.

In accordance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA), the U.S. Department of Health and Human Services (HHS) has set forth standards for protecting the privacy and security of certain health information, whether it is stored on paper or electronically. The HIPAA Privacy Rule (http://www.healthit.gov/providers-professionals/limits-using-patientinformation)

provides Federal protections for individually identifiable health information, sometimes referred to as "protected health information". The Privacy Rule protects paper, electronic, and oral information. The Security Rule applies only to information maintained in electronic form. This includes information in electronic health records.

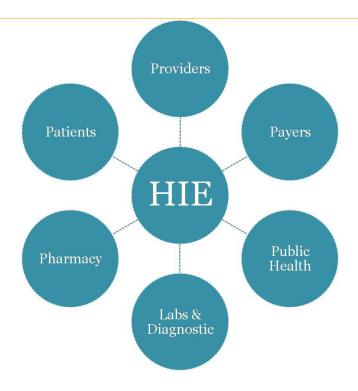
ix. What is E-Prescribing?

E-prescribing is an electronic way to generate prescriptions through an automated data-entry process utilizing e-prescribing software and a transmission network which links to participating pharmacies.

E-prescribing has been described as the solution to improved patient safety and reducing medication costs. It is estimated that approximately 7,000 deaths occur each year in the United States due to medication errors. These errors are predominately due to hand-writing illegibility, wrong doing, missed drug-drug or drug-allergy reactions. With approximately 3 billion prescriptions written annually, which constitutes one of the largest paper-based processes in the United States, the writing of prescriptions can be streamlined and efficient by using an e-prescribing system.

x. Current and Future HIE Participants At-a-Glance





For more information visit www.hie.illinois.gov/